Categorical learning in pigeons: The role of texture and shape in complex static stimuli.

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Pigeons are known to be able to categorize a wide variety of visual stimulus classes. However, it remains unclear which are the characteristics of the perceptually relevant features employed to reach such good performance. Here, we investigate the relative contributions of texture and shape information to categorization decisions about complex natural classes. We trained three groups of pigeons to discriminate between sets of photorealistic frontal images of human faces according to sex and subsequently, tested them on different stimulus sets. Only the pigeons that were presented with texture information were successful at the discrimination task. Pigeons seem to possess a sophisticated texture processing system but are less capable in discriminating shapes. The results are discussed in terms of the possible evolutionary advantages of utilizing texture as a very general and potent perceptual dimension in the birds’ visual environment.